

rejected claims 9-10 under 35 U.S.C. 103(a) as being unpatentable over Nasir, in view of Dixon, and further in view of McMahon et al., U.S. Patent No. 5,166,078 ("McMahon").

For the reasons set forth below, Applicants traverse the claim rejections and request reconsideration.

## **I. Claim Rejections**

With respect to the Examiner's rejections of the claims under § 103, Applicants submit that the Examiner has not established a *prima facie* case of obviousness. In particular, a *prima facie* case of obviousness requires the following three elements: (1) a prior art suggestion or motivation to modify the reference or to combine reference teachings; (2) a prior art teaching that the asserted modification or combination would have a reasonable expectation of success; and (3) the prior art reference or references must teach or suggest all the claim limitations. *See* MPEP § 2143. However, the Examiner has not established any of these three elements.

With respect to element (1), independent claims 1 and 11 recite a "tracer comprising an aflatoxin oxime conjugated to a fluorophore." The Examiner's position is that Dixon teaches converting aflatoxin B1 to aflatoxin B1-oxime when testing for aflatoxins because the aflatoxin B1 lacks the necessary functional group for conjugation to a label. In fact, Dixon teaches converting aflatoxin B1 to an oxime for conjugation to bovine serum albumin (BSA) and ovalbumin (OA). Thus, Dixon does not teach conjugating an aflatoxin oxime to a fluorophore, as recited in claims 1 and 11. Moreover, the Examiner has not identified any prior art suggestion or motivation for replacing the aflatoxin oxime conjugated to BSA or OA, as taught by Dixon, with an aflatoxin oxime conjugated to a fluorophore. Although the Examiner cites Nasir as teaching using fluorescence polarization to analyze mycotoxins in grains, the Examiner has

conceded that Nasir does not refer to aflatoxin specifically. As a result, Nasir does not provide any suggestion or motivation to replace the BSA or OA in the aflatoxin oxime conjugate, taught by Dixon, with a fluorophore.

With respect to elements (2) and (3), claims 1 and 11 recite that the tracer is able to bind to an antibody specific for aflatoxin "to produce a detectable change in fluorescence polarization." In particular, the Examiner has failed to identify any prior art teaching of a tracer that has this special property. The Examiner has not identified any teaching that an aflatoxin oxime conjugated to a fluorophore would still be able to bind to an antibody specific for aflatoxin. Nor has the Examiner identified any teaching that any binding would produce a detectable change in fluorescence polarization. In fact, Nasir teaches that even if binding occurs little polarization shift may be observed, due to a phenomenon called the "propeller effect." *See* Nasir, p. 180. In addition, as noted above, Dixon does not teach an aflatoxin oxime conjugated to a fluorophore, and Nasir does not refer to aflatoxin at all. As a result, the Examiner has failed to identify a prior art teaching of a tracer, comprising aflatoxin oxime conjugated to a fluorophore, that has the property of being able to an antibody specific to aflatoxin to produce a detectable change in fluorescence polarization.

Accordingly, Applicants submit that claims 1 and 11 are allowable over the prior art of record, including Dixon and Nasir. Applicants further submit that claims 2-10 and 12-18 are also allowable as depending from allowable claims.

## II. Information Disclosure Statement

The Examiner has noted that the list of information may not be incorporated into the specification but must be submitted as a separate paper. However, Applicants had mailed an Information Disclosure Statement, as a separate paper and with copies of the cited references, on October 4, 2002, a few days before the Office Action was mailed. Thus, the Applicant's Information Disclosure Statement and the Examiner's Office Action appear to have crossed in the mail. Applicants expect that the Examiner has by now received the Information Disclosure Statement. Accordingly, Applicants respectfully request the Examiner to consider each of the references listed in the Information Disclosure Statement and to indicate such consideration.

## CONCLUSION

Applicants submit that the present application is now in condition for allowance and notice to that effect is hereby requested. Should the Examiner feel that further dialog would advance the subject application to issuance, the Examiner is invited to telephone the undersigned at any time at (312) 913-0001.

Respectfully submitted,  
**McDonnell Boehnen Hulbert &  
Berghoff**

Date: January 8, 2003

By: Richard A. Machonkin  
Richard A. Machonkin  
Reg. No. 41,962